

A Groundbreaking Food Chemistry Collection, with New Editions of Bestsellers!

Vitamin Analysis for the Health and Food Sciences Second Edition

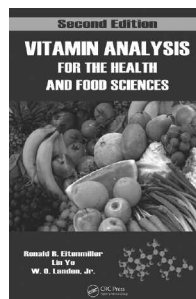
Ronald R. Eitenmiller
The University of Georgia, Athens, USA

W. O. Landen, Jr.
Consultant, Lavonia, Georgia, USA

Lin Ye
The Coca-Cola Company, Atlanta, Georgia, USA

Employing a uniform, easy-to-use format, this second edition provides explores methods of vitamin analysis applicable to foods, supplements, and pharmaceuticals. Highlighting the rapid advancement of vitamin assay methodology, the book emphasizes the use of improved and sophisticated instrumentation including the widely adopted LC-MS. Designed as a bench reference, this volume covers basic chemistry and biochemistry and discusses available analytical methods emphasizing regulatory methods and advanced methods of current significance. It supplies insight into practical problem solving including an awareness of the stability of vitamins and their extraction from different biological matrices.

Catalog no. 9771, January 2008, 664 pp.
ISBN: 978-0-8493-9771-4, \$149.95 / £82.00

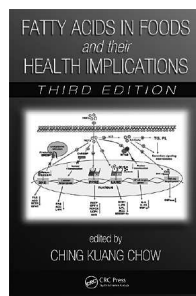


Fatty Acids in Foods and their Health Implications Third Edition

Edited by
Ching Kuang Chow
University of Kentucky, Lexington, USA

Completely updated, revised, and expanded, this third edition retains the highly detailed, authoritative quality of the previous editions to present the most current knowledge of fatty acids in food and food products and reveal diverse health implications. It includes eight entirely new chapters and several rewrites covering fatty acids in foods and food preparation and the health related effects of specific fatty acids on metabolism, visual dysfunction, aging, inflammation, energy homeostasis, cognition, and brain development. The most complete resource available on fatty acids and their biological effects, this book provides state-of-the-science information from all corners of nutritional and biochemical research.

Catalog no. 7261, January 2008, 1296 pp.
ISBN: 978-0-8493-7261-2, \$179.95 / £99.00



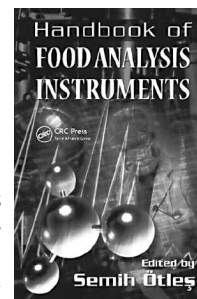
Handbook of Food Analysis Instruments

Edited by
Semih Ötleş
Ege University, Izmir, Turkey

NEW!

Because the presence and interactions of various compounds in foods during storage and processing impact all aspects of quality, applying proper methods for the analysis of foods is a critical endeavor. During the past century, analytical methods have evolved considerably to include the use of increasingly sophisticated instruments. This book focuses on the origin, concept, and use of these instruments. Each chapter presents a specific type of instrument, nuclear magnetic resonance spectroscopy, microwave-assisted process, and more. The operating principles, definitions, theory, and applications to food analysis are examined for every instrument covered in the text.

Catalog no. 45660, September 2008, 544 pp.
ISBN: 978-1-4200-4566-6, \$169.95 / £90.00



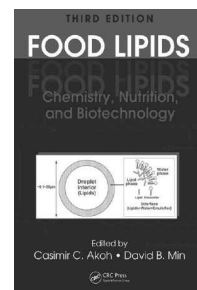
Food Lipids Chemistry, Nutrition, and Biotechnology, Third Edition

Edited by
Casimir C. Akoh
The University of Georgia, Athens, USA

David B. Min
The Ohio State University, Columbus, USA

Highlighting the role of dietary fats in foods, human health, and disease, the third edition of **Food Lipids** emphasizes lipids from the point of entry into the food supply. New chapters cover polyunsaturated lipid oxidation in aqueous systems, total antioxidant evaluation and synergism, tocopherol stability and prooxidant mechanisms of oxidized tocopherols in lipids, and the effects and mechanisms of minor compounds in oil on lipid oxidation. Addressing the chemistry of lipid and antioxidant reactions as well as applications in biotechnology, this edition presents an in-depth discussion on lipid oxidation and antioxidants, with updated information and references throughout the text.

Catalog no. 46632, March 2008, 928 pp.
ISBN: 978-1-4200-4663-2, \$239.95 / £126.00



A Groundbreaking Food Chemistry Collection

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Fennema's Food Chemistry Fourth Edition

Edited by
Srinivasan Damodaran, Kirk L. Parkin,
and Owen R. Fennema
University of Wisconsin-Madison, USA

The latest edition of the most respected internationally-recognized reference in food chemistry for more than 30 years, **Fennema's Food Chemistry** introduces new contributing experts for several chapters and examines the latest research in biotechnology in an entirely new chapter: *Impact of Biotechnology on Food Supply and Quality*. All chapters reflect recent updates and advances and, expanding and evolving their focus to highlight recent findings in molecular interactions and the connection between bioactive agents in food and human health. Divided into three sections, the book covers major and minor food components and food systems. Useful appendices include the international system of units, conversion factors, log P values calculation, and Greek alphabet.

Catalog no. DK3118, January 2008, 1160 pp.
ISBN: 978-0-8247-2345-3, \$199.95 / £115.00

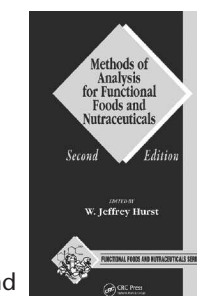


Methods of Analysis for Functional Foods and Nutraceuticals Second Edition

Edited by
W. Jeffrey Hurst
Hershey Foods Technical Center, Pennsylvania, USA

Written by international experts, the second edition of this highly successful text has been revised to reflect dramatic advances in the field of functional foods and nutraceuticals. Providing an invaluable source of information for laboratories involved in the food, dietary supplement, and pharmaceutical industry, all analytical methods from the first edition have been updated. It offers new techniques for the analysis of carotenoids, phytoestrogens, flavonoids, vitamins, and carbohydrates. With three new chapters on polyphenol analysis along with 85 percent new or revised information, this book is an indispensable addition to any food analyst's library.

Catalog no. 7314, March 2008, 552 pp.
ISBN: 978-0-8493-7314-5, \$149.95 / £79.00



Tea and Tea Products Chemistry and Health-Promoting Properties

Edited by
Chi-Tang Ho
Rutgers University, New Brunswick, New Jersey, USA

Jen-Kun Lin
National Taiwan University, Taipei

Fereidoon Shahidi
Memorial University of Newfoundland, Canada

While the health benefits of green tea are well-documented, researchers have only recently turned their attention to the action and health benefits of other teas. **Tea and Tea Products: Chemistry and Health-Promoting Properties** provides extensive coverage of the chemistry, biology, and health promoting properties of most varieties including black, green, and oolong. Written by leading natural product and nutritional experts, this book presents comprehensive and up-to-date perspectives on tea components that delve into taste components, flavor chemistry and stability, as well as the molecular biology of polyphenols, such as catechins and theaflavins. The text also discusses production and manufacturing aspects.

Catalog no. 8082, July 2008, 320 pp.
ISBN: 978-0-8493-8082-2, \$149.95 / £79.00



Kinetic Modeling of Reactions In Foods

Edited by
Tiny van Boekel
Wageningen University, The Netherlands

This volume provides an introduction to kinetic models and modeling techniques and their applications in food science and technology. It argues that the modeling of food changes is kinetic modeling. Integrating food science knowledge, kinetics, and statistics, this book explores the potential to predict and control food quality attributes with computer models. It presents applications of kinetic models using general chemical, physical, and biochemical principles. It also includes an introduction to Bayesian statistics in kinetic modeling. The text illustrates concepts using real-world examples rather than hypothetical data.

Catalog no. DK3903, December 2008, c. 400 pp.
ISBN: 978-1-57444-614-2, \$179.95 / £95.00



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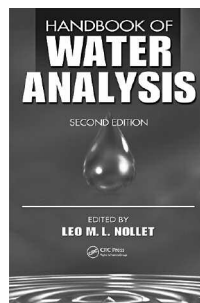
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Handbook of Water Analysis Second Edition

Edited by
Leo M.L. Nollet
University College Ghent, Applied Engineering
Sciences, Belgium

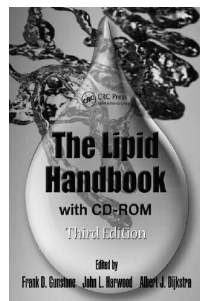


Extensively revised and updated, Handbook of Water Analysis, Second Edition provides the most current analytical techniques for detecting compounds in water samples. Maintaining the detailed and accessible style of the original, this edition demonstrates water sampling and preservation methods by enumerating different ways to measure chemical and radiological characteristics and giving step-by-step descriptions of separation, residue determination, and clean-up techniques for a variety of fresh- and salt-water. It reveals new information regarding the analysis of endocrine disrupting compounds and residues of plastics as well as four new chapters on acrylamide, trihalomethanes, phthalates, and volatile organic compounds in water.

Catalog no. 7033, 2007, 784 pp.
ISBN: 978-0-8493-7033-5, \$269.95 / £150.00

The Lipid Handbook with CD-ROM Third Edition

Frank D. Gunstone
University of St. Andrews, Dundee, Scotland
John L. Harwood
School of Biosciences, Cardiff University, Wales, UK
Albert J. Dijkstra
Sàrl Dijkstra-Tucker, St. Eutrope-de-Born, France

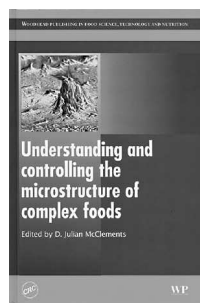


Fully revised, the third edition places a stronger emphasis on the nutritional, medical, and agricultural aspects of lipids to reflect the increased interest and research in these areas in the past 10 years and beyond. This edition features updated chapters and expanded coverage, including additional compounds to its dictionary. The accompanying CD-ROM features the ability to search the full text and the dictionary section by structure or substructure. It is written by experts from a diverse range of fields, many of whom have contributed new research in the areas under review.

Catalog no. 9688, 2007, 1472 pp.
ISBN: 978-0-8493-9688-5, \$630.00 / £340.00

Understanding and Controlling the Microstructure of Complex Foods

Edited by
David Julian McClements
University of Massachusetts, Amherst, USA



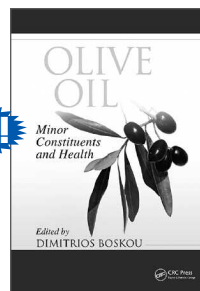
With its distinguished editor and array of international contributors, this book provides a review of current understanding of significant aspects of food structure and methods for its control. It begins with coverage of the fundamental structural elements present in foods and the forces which hold them together. The book then discusses novel analytical techniques which can provide information on the morphology and behavior of food materials, then examines how the principles of structural design can be employed to improve performance and functionality of foods.

Catalog no. WP6573, January 2008, 772 pp.
ISBN: 978-1-4200-6573-2, \$319.95 / £160.00

Olive Oil Minor Constituents and Health

Edited by
Dimitrios Boskou
Aristotle University of Thessaloniki, Greece

NEW!

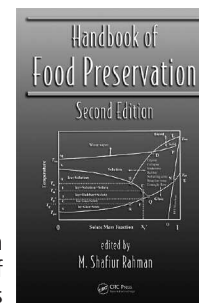


Epidemiological studies indicate that the consumption of natural antioxidants from such plant-derived sources as olive oil produces beneficial health effects. **Olive Oil: Minor Constituents and Health** provides a balanced understanding of the pharmacological properties of phenols and other bioactive ingredients in the composition of olive oil. It discusses recent technological developments to retain optimal levels of bioactive ingredients as well as methodologies for the future study of olive oil's biological effects. The text covers research on the bioavailability of olive oil phenols and addresses the role of olive oil in the prevention of cardiovascular disease and certain types of cancer.

Catalog no. 59939, July 2008, 248 pp.
ISBN: 978-1-4200-5993-9, \$129.95 / £67.99

Handbook of Food Preservation Second Edition

Edited by
M. Shafiur Rahman
Sultan Qaboos University, Muscat, Oman



Almost doubled in size, this second edition provides fundamental and practical aspects of the preservation methods and new techniques that are most important to those in the industry. This book emphasizes practical, cost-effective strategies for implementing preservation techniques and describes the exact mode or mechanisms involved in each preservation method by exploring the effects on food properties. The text is organized based on the mode of preservation method: fresh food products; chemicals and microbes; water, structure, and atmosphere; heat and energy; and indirect approaches.

Catalog no. DK3871, January 2008, 1088 pp.
ISBN: 978-1-57444-606-7, \$159.95 / £88.00

Tocotrienols Vitamin E Beyond Tocopherols

Edited by
Ronald Ross Watson
University of Arizona, Tucson, USA
Victor R. Preedy
King's College, London, UK

NEW!



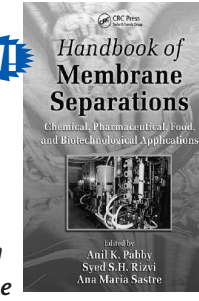
This volume goes far beyond the usual considerations of vitamin E to focus on tocotrienols, which, along with tocopherols, constitute the bioactive ingredients of vitamin E. Compiling contributions from leading researchers, this book builds upon a recent symposium sponsored by the American Oil Chemists Society. It examines sources, discusses isolation, and delves into the biochemistry and chemistry of tocotrienols. The book then takes a comprehensive look at their role in health and disease, with a special focus on heart disease.

Catalog no. 80377, August 2008, 424 pp.
ISBN: 978-1-4200-8037-7, \$149.95 / £79.00

Handbook of Membrane Separations Chemical, Pharmaceutical, Food, and Biotechnological Applications

Edited by
Anil K. Pabby
Bhabha Atomic Research Centre, Tarapur, India
Syed S.H. Rizvi
Cornell University, Ithaca, New York, USA

NEW!



Ana Maria Sastre
Universita Politecnica de Catalunya, Barcelona, Spain

"...a comprehensive discussion of membrane applications in the chemical, food, and pharmaceutical industries, in biotechnology, and in the treatment of toxic industrial effluents. The applications of membranes in different areas are described by scientists and engineers who not only are experts in membrane science and technology, but also have extensive experience in the specific field of membrane application...."

—Heiner Strathmann, University of Stuttgart, Germany, From the Foreword

Catalog no. 9549, July 2008, 1184 pp.
ISBN: 978-0-8493-9549-9, \$239.95 / £158.00

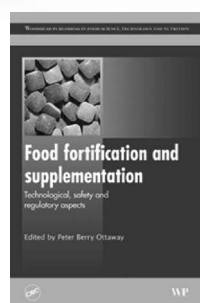
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Food Fortification and Supplementation Technological, Safety and Regulatory Aspects

Edited by
P. Berry Ottaway
Berry Ottaway and Associates Ltd, UK

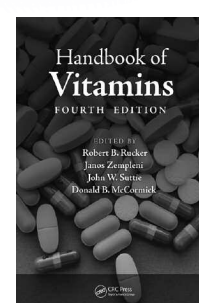


This book provides a comprehensive summary of the technology of food fortification and supplementation and associated safety and regulatory aspects. It covers methods of fortifying foods, not only with vitamins and minerals, but also with other nutraceuticals such as amino acids, polyphenols, and fatty acids. Subsequent chapters discuss safe levels for the addition of vitamins and minerals to foods and explain how to analyze polyphenols, antioxidants, and other nutraceuticals in fortified foods and supplements

Catalog no. WP7201, March 2008, 320 pp.
ISBN: 978-1-4200-7201-3, \$239.95 / £126.00

Handbook of Vitamins Fourth Edition

Edited by
**Robert B. Rucker, Janos Zemleni,
John W. Suttie, and Donald B. McCormick**

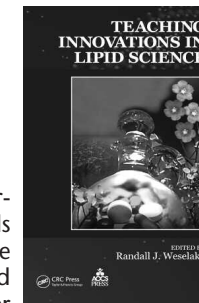


Thoroughly revised and updated, this fourth edition highlights the most recent research in vitamins and gene expression, vitamin-dependent genes, and vitamin effect on DNA stability. It includes new chapters on vitamin-dependent modification of chromatin, analysis of vitamin accelerated mass spectrometry, and dietary reference intakes for vitamins. The book encompasses classical and modern approaches to vitamins, focusing on human nutrition, vitamin analysis, and vitamin action at the molecular level. Featuring contributions from international experts, this remains an ideal reference for nutritional scientists, food scientists, and graduate students.

Catalog no. 4022, 2007, 608 pp.
ISBN: 978-0-8493-4022-2, \$149.95 / £82.00

Teaching Innovations in Lipid Science

Edited by
Randall J. Weselake
University of Alberta, Edmonton, Canada



Featuring practical strategies and exciting experiments, this book addresses lipid education at levels ranging from the general public to post-graduate students. It highlights the development and implementation of creative programs that foster interest in lipid science. The author presents novel problem-solving approaches and numerous experiments to suit a range of educational levels while demonstrating concepts such as chromatographic methods for lipid analysis. Peer-reviewed contributions describe several methods and approaches for creating new lipid courses, modifying existing ones, or pursuing additional novel avenues of instruction.

Catalog no. AO7369, January 2008, 280 pp.
ISBN: 978-0-8493-7369-5, \$89.95 / £48.99